

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:	Heinz et al.	Docket No.:	0093/000032
Serial No.:	10/019,048	Confirmation No.:	5170
Filing Date:	12/27/2001	Examiner:	GUZO, DAVID
Customer No.:	26474	Art Unit:	1636

For: Plants expressing delta6-desaturase genes and oils from these plants containing pufas and method for producing unsaturated fatty acids

Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

DECLARATION PURSUANT TO 37 C.F.R. §1.131

Honorable Sir:

I, Dr. Ernst Heinz, citizen of Germany, who currently resides at Püttkampsweg 13, 22609 Hamburg, Germany, my post office address being the same as my residence address, hereby declare:

1. I am named as a joint inventor, along with the following individuals in U.S. Application Serial No. 10/019,048:

Thomas Girke, a citizen of Germany, who currently resides and has a post office address at 6846 Hawarden Drive Riverside, CA 92506, U.S.;

Jodi Scheffler, a citizen of the United States of America, who currently resides and has a post office address at 51 Country Road 228, Oxford MS 38655, U.S.; and

Oswaldo Da Costa e Silva, a citizen of Brazil, who currently resides and has a post office

address at Auf der Platte 5, 67435 Neustadt, Germany;

2. I believe that Thomas Girke, Jodi Scheffler, Oswaldo Da Costa e Silva and I are the sole co-inventors of the invention described and claimed in U.S. Patent Application Serial No. 10/019,048;

3. On July 20, 2000, Thomas Girke, Jodi Scheffler, Oswaldo Da Costa e Silva and I assigned the entire right, title and interest in the above-identified application and invention to: BASF Plant Science GmbH, having a place of business at 67056 Ludwigshafen, Germany, which assignment was recorded in the U.S. Patent and Trademark Office on December 27, 2001 at Reel/Frame: 012552/0033.

4. The above-identified invention was conceived and reduced to practice no later than 1997.

5. I write to confirm that the present invention was made prior to the Girke publication in Plant Journal 15 (1998), p. 39-48 published on July 27, 1998, in the following referred to as "Girke publication". I was a professor at the university of Hamburg from 1984 until 2004 and Thomas Girke was one of my doctoral students. The cloning and functional characterization of the delta-6 desaturase of *Physcomitrella patens* of the invention was part of the doctoral thesis of Thomas Girke, listed as one of the co-inventors in section 1, supra. The doctoral thesis of Thomas Girke has been carried out from 1996 until 1998 and has been formally presented to me in May 1998, i.e. before the publication date of the Girke publication, as evident from the cover sheet of the attached relevant parts of the doctoral thesis of Thomas Girke (Exhibit A). For the convenience of the Primary Examiner, an English translation thereof has been enclosed.

In particular, the doctoral thesis shows the cloning of the nucleotide and amino acid sequence of the delta-6 desaturase of *Physcomitrella patens* of the invention; see e.g. chapter 3.1.2 and Figure 3.1.1.2 in Exhibit A. In addition, chapter 3.5 in combination with Figures 3.4.1 and 3.5.1 and Table 3.5.1 of Exhibit A show the functional biochemical characterization of the enzyme, demonstrating its delta-6 desaturase activity.

For the sake of completeness, I have attached a letter of the university of Hamburg, confirming that the doctoral thesis of Thomas Girke was publicly available not before

September 8, 1998 (Exhibit B).

6. I hereby declare that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Ernst Heinz



Date